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Claims

1. A cutting tool insert particularly for turning of steel comprising a cemented carbide body and a coating c h a r a c t e r i s e d in that said cemented carbide body consists of WC, 6-15, preferably 9-12, wt-% Co and 0.2-1.8 wt-% cubic carbides of Ti, Ta and/or Nb and a highly W-alloyed binder phase with a CW-ratio of 0.78-0.93, preferably 0.80-0.91 and in that said coating comprises

- a first (innermost) layer of $TiC_xN_yO_z$ with a thickness of <1.5 µm, and with equiaxed grains with size <0.5 µm

- a layer of $TiC_xN_yO_z$ with a thickness of 2-5 µm with columnar grains with an average diameter of <5 µm-

- an outer layer of a smooth, fine-grained (0.5-2 µm) κ-Al_2O_3-layer with a thickness of 0.5-6 µm.

2. Cutting insert according to any of the preceding claims c h a r a c t e r i s e d in that the outermost layer is a thin 0.1-1 µm TiN-layer.

3. Cutting insert according to claim 2 c h a r a c t e r i s e d in that the outermost TiN-layer has been removed along the cutting edge.

4. Method of making an insert for turning comprising a cemented carbide body and a coating c h a r a c t e r i z e d in that a WC-Co-based cemented carbide body with a highly W-alloyed binder phase with a CW-ratio of 0.78-0.93 is coated with

- a first (innermost) layer of $TiC_xN_yO_z$ with x+y+z=1, preferably z<0.5, with a thickness of 0.1-1.5 µm, with equiaxed grains with size <0.5 µm using known CVD-methods

- a layer of $TiC_xN_yO_z$ with x+y+z=1, preferably with z=0 and x>0.3 and y>0.3, with a thickness of 2-8 µm with columnar grains with a diameter of about <5 µm deposited by MTCVD-technique, using acetonitrile as the carbon and

nitrogen source for forming the layer in a preferred temperature range of 850-900 °C.

- a layer of a smooth κ-Al_2O_3 with a thickness of 0.5-6 μm and

- preferably a layer of TiN with a thickness of <1 μm.

5. Method according to the previous claim characterized in that said cemented carbide body has a cobalt content of 9-12 wt% and 0.4-1.8 wt% cubic carbides of Ta and Nb.

6. Method according to claim 4 or 5 characterised in that said cemented carbide body has a cobalt content of 10-11 wt%.

7. Method according to claim 4, 5 or 6 characterized in a CW-ratio of 0.82-0.90.

8. Method according to any of the claims 4, 5, 6 and 7 characterized in that the outermost TiN-layer, if present, is removed along the cutting edge.

Sub a12 cont

add a3

add a14